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1: Mol Cell Biol 1984 Dec;4(12):2858-64

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Cell cycle-dependent expression of thymidylate synthase in *Saccharomyces cerevisiae*.

Storms RK, Ord RW, Greenwood MT, Mirdamadi B, Chu FK, Belfort M.

Synchronous populations of *Saccharomyces cerevisiae* cells, generated by two independent methods, have been used to show that thymidylate synthase, in contrast to the vast majority of cellular proteins thus far examined, fluctuates periodically during the *S. cerevisiae* cell cycle. The enzyme, as assayed by two different methods, accumulated during S period and peaked in mid to late S phase, and then its level dropped. These observations suggest that both periodic synthesis and the instability of the enzyme contribute to the activity profile seen during the cell cycle. Accumulation of thymidylate synthase is determined at the level of its transcript, with synthase-specific mRNA levels increasing at least 10-fold to peak near the beginning of S period and then falling dramatically to basal levels after the onset of DNA synthesis. This mRNA peak coincided with the time during the cell cycle when thymidylate synthase levels were increasing maximally and immediately preceded the peak of DNA synthesis, for which the enzyme provides precursor dTMP.

PMID: 6396509 [PubMed - indexed for MEDLINE]

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ZCAPLUS
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NEWS 9 Jun 03 New e-mail delivery for search results now available
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=> s test (w)compound (2A) uracil (2a) misincorporation

L1 0 TEST (W) COMPOUND (2A) URACIL (2A) MISINCORPORATION

=> s test (2a)compound (2A) uracil (2a) misincorporation

L2 0 TEST (2A) COMPOUND (2A) URACIL (2A) MISINCORPORATION

=> s test (2a)compound and uracil (2a) misincorporation

L3 0 TEST (2A) COMPOUND AND URACIL (2A) MISINCORPORATION

=> s test (2a)compound and uracil (2a) misincorporation

L4 0 TEST (2A) COMPOUND AND URACIL (2A) MISINCORPORATION

=> uracil misincorporation.

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L5 151 URACIL MISINCORPORATION

=> s 15 and DNA (w) glycosylase

L6 47 L5 AND DNA (W) GLYCOSYLASE

=> s 15 and test (s) compound

L7 0 L5 AND TEST (S) COMPOUND

=> s 15 and test
L8 12 L5 AND TEST

=> dup rem 18
PROCESSING COMPLETED FOR L8
L9 7 DUP REM L8 (5 DUPLICATES REMOVED)

=> d 18 1-7

L9 ANSWER 1 OF 7 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:296469 BIOSIS
DN PREV200100296469
TI Effect of controlled folate intake on misincorporation of uracil in DNA
of elderly women.
AU Keesling, Susan E. (1); Herrlinger-Garcia, Kelli (1); Rampersaud, Gail C.
(1); Theriaque, Douglas W. (1); Gregory, Jesse F. (1); Bailey, Lynn B.
(1); Knuwell, Gail P. A. (1)
CS (1) University of Florida, Gainesville, FL, 32611-0370 USA
SO FASEB Journal, (March 7, 2001) Vol. 15, No. 4, pp. A611. print.
Meeting Info.: Annual Meeting of the Federation of American Societies for
Experimental Biology on Experimental Biology 2001 Orlando, Florida, USA
March 31-April 04, 2001
ISSN: 0892-6638.
DT Conference
LA English
SL English

L9 ANSWER 2 OF 7 MEDLINE
AN 2001324945 MEDLINE
DN 21192543 PubMed ID: 11295154
TI The role of folic acid and Vitamin B12 in genomic stability of human
cells.
AU Fenech M
CS CSIRO Health Sciences and Nutrition, Adelaide, Australia..
michael.fenech@hsn.csiro.au
SO MUTATION RESEARCH, (2001 Apr 18) 475 (1-2) 57-67. Ref: 87
Journal code: 0400763. ISSN: 0027-5107.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 200106
ED Entered STN: 20010611
Last Updated on STN: 20010611
Entered Medline: 20010607

L9 ANSWER 3 OF 7 MEDLINE
AN 2000387906 MEDLINE
DN 20347366 PubMed ID: 10888643
TI The interaction of vpr with uracil DNA glycosylase modulates the human
immunodeficiency virus type 1 In vivo mutation rate.
AU Mansky L M; Preveral S; Selig L; Benarous R; Benichou S
CS Department of Molecular Virology, Immunology, and Medical Genetics,
Center
for Retrovirus Research, and Comprehensive Cancer Center, Ohio State
University Medical Center, Columbus, Ohio 43210, USA.. mansky.3@osu.edu
NC GM 56615 (NIGMS)

SO JOURNAL OF VIROLOGY, (2000 Aug) 74 (15) 7039-47.
Journal code: 013724. ISSN: 0022-538X.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; AIDS
EM 200008
ED Entered STN: 20000818
Last Updated on STN: 20000818
Entered Medline: 20000810

L9 ANSWER 4 OF 7 MEDLINE
AN 97250530 MEDLINE
DN 97250530 PubMed ID: 9096386
TI Pileate deficiency causes **uracil misincorporation** into human DNA and chromosome breakage: implications for cancer and neuronal damage.

AU Blount B C; Mack M M; Wahr C M; MacGregor J T; Hiatt R A; Wang G; Wickramasinghe S N; Everson R B; Ames B N
CS Department of Cell and Molecular Biology, University of California, Berkeley 94720, USA.

NC CA30918 (NCI)
ES01496 (NIEHS)

SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1997 Apr 1) 94 (7) 3290-5.
Journal code: 7505676. ISSN: 0027-8424.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199705
ED Entered STN: 19970514
Last Updated on STN: 19970514
Entered Medline: 19970508

L9 ANSWER 5 OF 7 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE

1
AN 1994:488203 BIOSIS
DN PREV199407421203
TI Induction of resistance to fluorodeoxyuridine cytotoxicity and DNA damage in human tumor cells by expression of Escherichia coli deoxyuridinetriphosphatase.

AU Canman, Christine E.; Radany, Eric H.; Parsels, Leslie A.; Davis, Mary A.;

Lawrence, Theodore E.; Maybaum, Jonathan
CS 4701 Upjohn Cent. Clinical Pharmacology, Univ. Michigan Med. Sch., Ann Arbor, MI 48109-0504 USA

SO Cancer Research, (1994) Vol. 54, No. 9, pp. 2296-2298.
ISSN: 0008-5472.

DT Article
LA English

L9 ANSWER 6 OF 7 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE

2
AN 1994:182096 BIOSIS
DN PREV199407195096
TI Bone marrow cells from vitamin B-12- and folate-deficient patients misincorporate uracil into DNA.

AU Wickramasinghe, S. N. (1); Fida, S.
CS (1) Dep. Haematol., St. Mary's Hosp. Med. Sch., Norfolk Place, London W2 1PG UK

SO Blood, (1994) Vol. 83, No. 6, pp. 1656-1661.
 ISSN: 0006-4971.
 DT Article
 LA English

 LP ANSWER 7 OF 7 CAPLUS COPYRIGHT 2002 ACS
 AN 1979:17749 CAPLUS
 DU 99:17749
 TI Accumulation of small fragments of DNA in isolated HeLa cell nuclei due
 to transient incorporation of dUMP
 AU Wist, Erik; Enghjem, Olav; Krokan, Hans
 CS Inst. Med. Biol., Univ. Tromsøe, Tromsøe, Norway
 SO Biochim. Biophys. Acta (1978), 520(2), 253-70
 CODEN: BBACAQ; ISSN: 0006-3002
 DT Journal
 LA English

=> s 16 and test
 L10 1 L6 AND TEST

=> d 110

L10 ANSWER 1 OF 1 MEDLINE
 AN 2000387906 MEDLINE
 DU 20347366 PubMed ID: 10888643
 TI The interaction of vpr with uracil **DNA glycosylase**
 modulates the human immunodeficiency virus type 1 In vivo mutation rate.
 AU Mansky L M; Preveral S; Selig L; Benarous R; Benichou S
 CS Department of Molecular Virology, Immunology, and Medical Genetics,
 Center for Retrovirus Research, and Comprehensive Cancer Center, Ohio State
 University Medical Center, Columbus, Ohio 43210, USA.. mansky.3@osu.edu
 NC GM 56615 (NIGMS)
 SO JOURNAL OF VIROLOGY, (2000 Aug) 74 (15) 7039-47.
 Journal code: 0113724. ISSN: 0022-538X.
 CY United States
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals; AIDS
 EM 200003
 ED Entered STN: 20000818
 Last Updated on STN: 20000818
 Entered Medline: 20000810

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